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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,233	02/11/2004	You-Cheol Shin	4591-383	4502
20575	7590	09/21/2004	EXAMINER	
MARGER JOHNSON & MCCOLLOM PC 1030 SW MORRISON STREET PORTLAND, OR 97205			BREWSTER, WILLIAM M	
			ART UNIT	PAPER NUMBER
			2823	

DATE MAILED: 09/21/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/777,233

**Applicant(s)**

SHIN ET AL.

**Examiner**

William M. Brewster

**Art Unit**

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**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☒ Certified copies of the priority documents have been received in Application No. 10/041,732.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>021104</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4 are rejected under 35 U.S.C. 102(b) as being anticipated by Pan et al., U.S. Patent No. 5,869,396.

Pan anticipates a method of manufacturing a semiconductor device comprising the steps of:

in fig. 1, forming a gate insulating layer 14A, on a semiconductor substrate 10;  
forming a silicon gate layer 16A on said gate insulating layer;  
forming gate lines by patterning said silicon gate layer,  
performing an impurity implantation 18a, 18b, by using said gate lines as a mask, col. 6, line 29 - col. 7, line 36;  
forming an interlayer insulating layer 22 over said substrate over which said impurity implantation is carried out;  
in fig. 2, exposing said silicon gate layer of said gate lines by planarizing said interlayer insulating layer; and  
in fig. 3, forming a metal silicide layer 24a, on an exposed surface of said silicon gate layer, col. 8, line 16 - col. 9, line 46;

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limitations from claim 2, the method of manufacturing a semiconductor device, in fig. 4, further including the steps of forming openings to expose a given region of said substrate by partially etching said interlayer insulating layer after said step of forming said interlayer insulating layer, and filling said openings by depositing a silicon layer 28a, 28c, col. 10, lines 42-67; in fig. 2, and wherein said step of exposing said silicon gate layer of said gate lines includes planarizing said silicon layer, col. 8, lines 16-42;

limitations from claim 3, the method of manufacturing a semiconductor device according to claim 1, wherein said step of forming said metal silicide layer comprises: depositing a metal layer by a sputtering process, col. 8, lines 38-61; annealing said metal layer; and removing non-reacted residual metal by an etching process, col. 8, line 62 - col. 9, line 46.

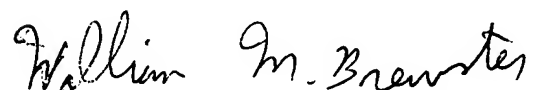
#### ***Claims 4-6 Rejection***

Claims 4-6 can be rejected under 35 U.S.C. 102(e), or possibly a 35 U.S.C. 103(a) as being unpatentable over Shin et al., U.S. Patent No. 6,376,876 B1, or Shin with a secondary reference. Applicant may overcome this rejection by stating for the record that Shin (876) is a commonly owned patent at the time of filing the current application.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Olik Chaudhuri can be reached on 571-272-1855. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, reading "William M. Brewster". The signature is written in a cursive style with a large initial "W".

16 September 2004

WB